

Work Order ID 139295

November 19, 2015 2:15:13 PM

Page 1

Item ID: 647.7703

Revision ID:

Item Name: Strut Assembly

Start Date: 11/19/2015 Start Qty: 12.00

Required Date: 12/3/2015 Req'd Qty: 12.00

Reference:

Approvals:

Process Plan:

Dtg 1 5 1 1 1 9 Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run

Start

NR1

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
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647.7700	A1
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110

Pick Kit

0.00

110

Packaging

Memo

0.00

Packaging

120

Weld per dwg A/R 4130 rod Batch: 127925 0.00

120

Large Fab

Memo

0.02

Large Fab

1- ASSEMBLE AND WELD AS PER DWG

***IMPORTANT DIMENSION IS 8.35" ***

130

QC9- Inspect visual per QSI004- Fusion Welds 0.00

130

QC

Memo

0.00

Quality Control

DAS

9

9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="width: 15%;">Skid-tube ☐</td> <td style="width: 15%;">Cross tube ☐</td> <td style="width: 15%;">Water Jet ☐</td> <td style="width: 15%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																											
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November 19, 2015 2:15:13 PM

Packaging

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

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Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
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Root Cause				FAULT CATEGORY			
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		OTHER : ☐																																																																					

November 19, 2015 2:15:13 PM

Item ID: 647.7703

Accept

N900040100

Setup Start *NS1*

Revision ID:

Item Name: Strut Assembly

Stop *NS2*

Start Date: 11/19/2015 **Start Qty:** 12.00

12

Cust Item ID:

Required Date: 12/3/2015 **Req'd Qty:** 12.00

12

Customer:

Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/
Work Center ID

Operation Description

Set Up/ Run Hours

Tool ID**Tool #****Plan
Code**

**Accept
Qty**

Reject
QtyReject
Number

**Insp.
Stamp**

200

Identify as per dwg & Stock Location. CK/14

0.00

200

Packaging

Memo

0.00

Packaging

DEC 15 2015

210

QC21- Final Inspection - Work Order Release

0.00

210

QC

Memo

0.02

Quality Control

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
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Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

November 19, 2015 2:15:17 PM

139295

647 7703

Required Date: 12/3/2015

Required Qty: 12.00

Comments: IPP REV:A 15.01.07 NEW ISSUE DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
647.7712		Manufactured	No				Each	16.0000		12			
647 7712 Strut Tube													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				CCK114				16					
				134880				2					
				136418				14					
647.7713		Manufactured	No				Each	17.0000		12			
647 7713 Strut Thread													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				CCK114				17					
				136155				7					
				138612				10					
647.7714		Manufactured	No				Each	18.0000		12			
647 7714 Strut Tube													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				WA001				18					
				136246				2					
				136690				8					
				138613				8					



APICAL INDUSTRIES, INC.
dba DART AEROSPACE

ENGINEERING CHANGE NOTICE NO.

05110

SHEET 1 OF 1

DWG NO. 647.7700

REV: A

PREPARED
BY

A. QUAN

DATE: 08/21/15

EFFECT ON DWG

☐ INC. ☒ UNINC.

DWG TITLE: STRUT ASSY

APPROVED BY:

ENGR

MFG

QC

EFF.

CURRENT ORDER

TRANSACTION CODES (TC):
A-ADD
R-REVISE
C-CREATE
D-DELETE

REASON: REVISED FINISH CALLOUT AS PER ECR 15-209

SHEET 1, NOTES IS:

ACTION: UPDATE MO & WO

NOTES:

- 1 MATERIAL: 4130 STEEL PER AMS-T-6736, .50" OD, .083" WALL THK.
- 2 MATERIAL: 4130 STEEL PER AMS-T-6736, .375" OD, .075" WALL THK.
- 3 MATERIAL: 4130 STEEL PER AMS-T-6736, .324" OD.
- 4 FINISH: PRIME IAW MIL-P-2337J TYPE I CLASS N; 1-2 MIL MAX
5. DEBURR AND BREAK ALL SHARP EDGES
6. IDENTIFY IAW MPP-120.
- 7 WELD IAW MIL-STD-2219. TIG WELD WITH FILLER ROD
- 8 FINISH: CAD PLATE IAW QQ-P-416F CLASS I TYPE II
- 9 MASK THREAD PRIOR TO FINISH.

SA 139295

20151119

F/N	TC	PART NUMBER	QTY	DESCRIPTION	MATERIAL/SPECIFICATION
DOCUMENTS EFFECTED: ☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☐ BOM					
CHANGE CATEGORY				DER REVIEW REQUIRED	
☐ MAJOR ☐ MINOR				☐ YES ☐ NO	

NOTES:

1. MATERIAL: 4130 STEEL PER AMS-T-6736, .50" OD, .083" WALL THK.
2. MATERIAL: 4130 STEEL PER AMS-T-6736, .375" OD, .075" WALL THK.
3. MATERIAL: 4130 STEEL PER AMS-T-6736, .324" OD.
4. FINISH: PRIME IAW MIL-P-2337J TYPE I CLASS N; 1-2 MIL MAX
5. DEBURR AND BREAK ALL SHARP EDGES
6. IDENTIFY IAW MPP-120.
7. WELD IAW MIL-STD-2219, TIG WELD WITH FILLER ROD
8. FINISH: CAD PLATE IAW MIL-C-5541 CLASS 1A
9. MASK THREAD PRIOR TO FINISH

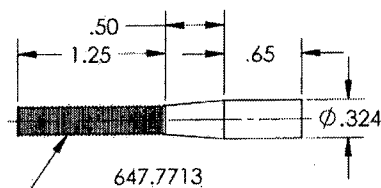
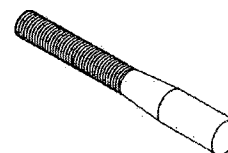
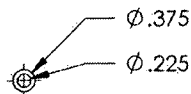
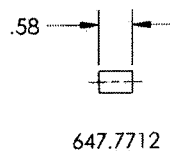
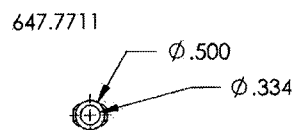
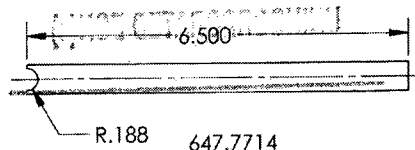
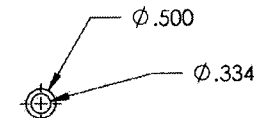
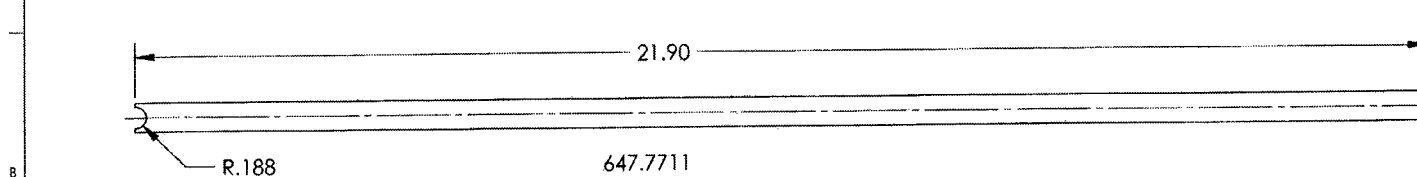
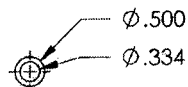
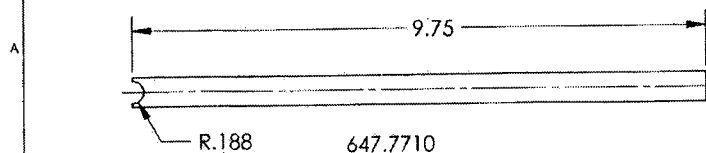
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	LAST PROTOTYPE REVISION: IRC		N/C
N/C	INITIAL RELEASE	12/25/09	P. BRAVO
A	INCORPORATED FCN 64741	11/12/14	P. BRAVO

UNINCORPORATED ECN(S)

05110

1			5	647.7714	STRUT TUBE	△	
1	1	1	4	647.7713	STRUT THREAD	△	△
1	1	1	3	647.7712	STRUT TUBE	△	
	1		2	647.7711	STRUT TUBE	△	
		1	1	647.7710	STRUT TUBE	△	
△	△			647.7703	STRUT ASSY		△ △
				647.7702	STRUT ASSY		△ △
				647.7701	STRUT ASSY		△ △
7703	7702	7701	FIND #	PART #	DESCRIPTION	MAT'L	SPEC.
QTY				PARTS LIST			
NEXT ASSY (S)				APICAL INDUSTRIES			
647.7300				2608 TEMPLE HEIGHTS DR.			
646.4000				OCEANSIDE, CA. 92056-3512 17601724-530			
				STRUT ASSY			
OFFICIAL DATE 11/30/09 DRAWN BY JACKSON CHECKED BY G. BARRETT AUTHORIZED APPROVAL BY BRADY LICENSED MECHANICAL				SHEET NO. 1 OF 2 SCALE NONE			

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.



1/4 - 28 THREAD

ORIGINAL DATE AND DATE DRAWN BY J. JACKSON DRAWING APPROVAL P. BRACKS		CHECKED D. BARKER	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ± 5°		SER. CAGE CODE 8 07M76	DWG. NO. 647.7700
APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300		STRUT ASSY	
SCALE: NONE		REV. A SHEET 2 OF 2	

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO30569**

Purchase Order Date 11/25/2015

PO Print Date 11/25/2015

Page Number 2 of 2

Order From :

GROUP ALTECH
2455 HALPERN

VC-ALT01

ST LAURENT, MONTREAL H4S 1N9

Ship To : DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone 514-355-3666

Ship To Contact

Ship To Phone

Ship Via:

FedEx PI ppd

Ship Acct:

3 139295

647.7703 STRUT
ASSEMBLY

12/7/2015

12.00

\$14.75

\$177.00

Yes

12/7/2015

Cad Plating is to be done per QQ-P-416F Class I Type II.

PLEASE NOTE: HYDROGEN ENDBRITALEMENT IS INCLUDED IN PRICING PER UNIT

Signature

Line Total:

\$177.00

4 71401-45

PROCUREMENT
QUALITY CLAUSES

12/7/2015

1.00

\$0.00

\$0.00

No

12/7/2015

Procurement Quality Clauses

A004 FAA-PMA /TSO

A005 RIGHT OF ENTRY

A016 PERSONNEL QUALIFICATION

A024 PROCESS CERTIFICATIONS

A025 CERTIFICATE OF CONFORMANCE

A041 QUALITY MANAGEMENT SYSTEM

A042 DART NOTIFICATION BY SUPPLIER

A043 RETENTION OF QUALITY DOCUMENTS

Line Total:

\$0.00

PO Total:

\$295.00

Handwritten initials

Note: Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Change Nbr: 2

Change Date: 11/25/2015



**Bon de livraison / Packing Slip
et / and
Certificat de conformité / Certificate of Compliance**

2455, Halpern, Saint-Laurent, QUÉBEC, H4S 1N9
Tel.:(514)335-3666 Fax.:(514)335-3868
Internet : www.groupaltech.com

Bon-Livraison / Pk.Slip # : 114257-1 01/12/2015
Bon-Commande. / W.Order # : 114257
Client P.O. # : PO30569
Transport :

Envoyé à / Ship to

DART AEROSPACE LTD
1270 ABERDEEN STREET
HAWKESBURY
ONTARIO, CANADA K6A 1K7

Commandé par / Order by

DART AEROSPACE LTD (1427)
1270 ABERDEEN STREET
HAWKESBURY
ONTARIO, CANADA K6A 1K7

#	No. Job No. Réf	NoSerie / Part Number Nom Produit / Product	Traitement Process	Poids Weight	Qté Qty	Envoyé Sent	A venir BO
1	UNIT 136459	647.7703 Rev.	CADMIUM YELLOW PER QQ-P-416F TY:2 CL:1	0.00	4	4	0
2	UNIT 136459	647.7703 Rev.	HYDROGEN ENBRITAMENT RELIEF (BAKE)	0.00	4	4	0
3	UNIT 138238	647.7703 Rev.	CADMIUM YELLOW PER QQ-P-416F TY:2 CL:1	0.00	4	4	0
4	UNIT 13238	647.7703 Rev.	HYDROGEN ENBRITAMENT RELIEF (BAKE)	0.00	4	4	0
5	UNIT 139295	647.7703 Rev.	✓ CADMIUM YELLOW PER QQ-P-416F TY:2 CL:1	0.00	12	12	0
6	UNIT 139295	647.7703 Rev.	✓ HYDROGEN ENBRITAMENT RELIEF (BAKE)	0.00	12	12	0

SP15-12-02.

Notes Additionnelles / Additional Notes

Epaisseur réelle
Actual Thickness

Inspecteur Qualité
Quality Inspector

Réçu par
Received By

Nous certifions que les pièces énumérées ci-dessus ont été traitées en conformité avec votre commande et vos spécifications et rencontrent les exigences.
Notre responsabilité financière et légale ne sera pas supérieure au montant de la facture issue.

We hereby certify that the parts listed above have been process in accordance with your purchase order and specifications and are in conformance with your requirements.
Our financial and legal responsibility will not be higher than the amount of invoice.